

# *Creating a culture of safety excellence*

## *The journey and the prize*



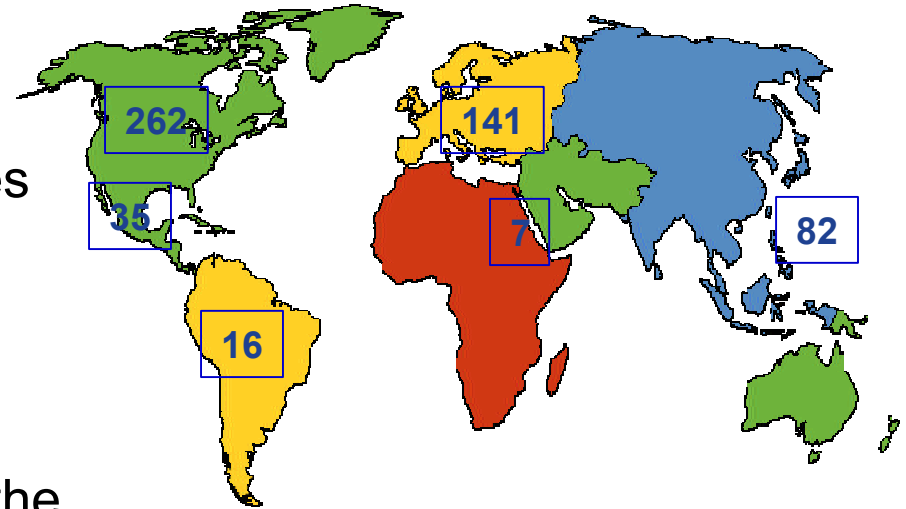
**Kurt Krueger, CIH**  
**Global Mgr & Team Leader,**  
**Health & Safety Programs**  
**Corporate Environmental Programs**  
**General Electric Company**



# Who We Are

## **GE – the company**

- More than 500 manufacturing operations around the globe
  - Customers in over 100 countries
  - 300,000+ employees
- 17,800 engines on 8,100 aircraft flying 660M passenger miles/year
- 230M medical scans/year
- 3,000 turbines creating nearly 1/3 the world's electricity
- Culture committed to integrity and driven by measurable performance



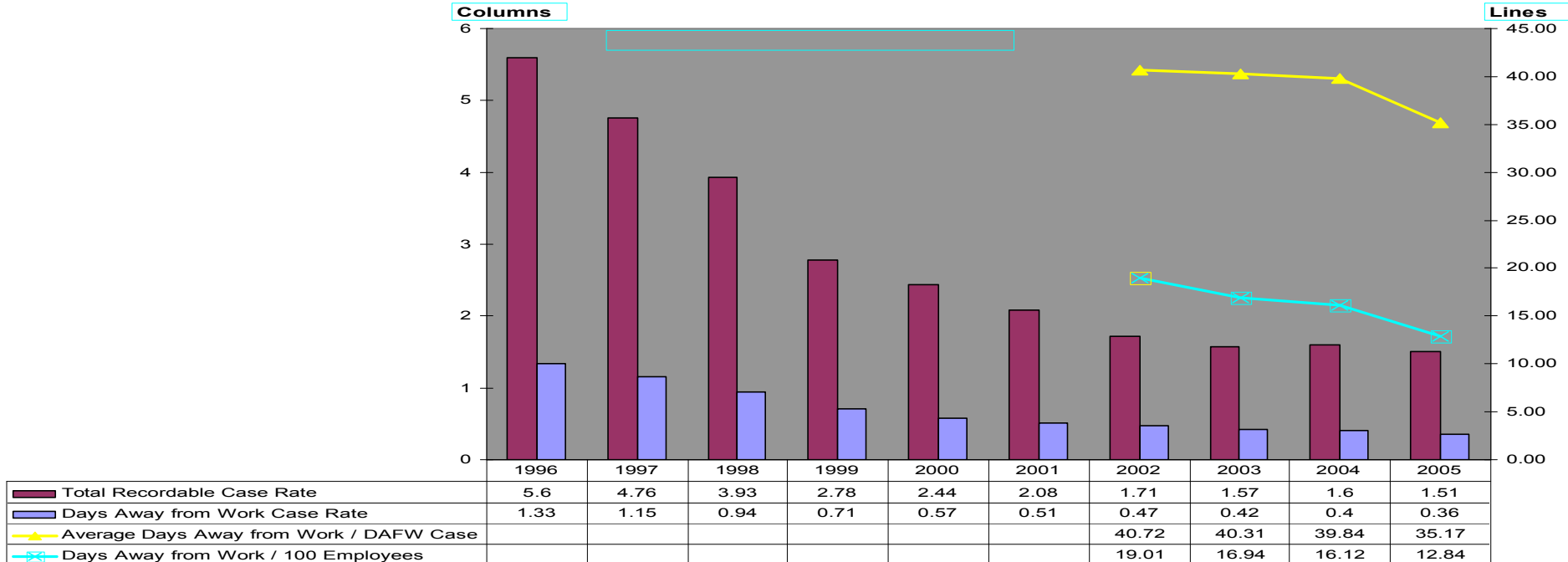
## **Steve Ramsey – VP for Corporate Environmental Programs**

- Arrived 1990 after working as an environmental prosecutor and a private lawyer – no safety experience
- What I heard when I arrived: “GE is pretty good at safety”

**Question: Is “pretty good” good enough?**

# Needed to Raise the Bar on Safety Performance

Global Incidence vs. Severity Rates



## GE in 1996

- \$79.2 Billion Total Revenue in
- ~239,000 employees
- Recordable rate of 5.6; Days Away rate of 1.3

**Objective:** Bring GE to world class performance with systems to create SUSTAINABLE culture change

**How:** One standard, one program, one set of metrics for every GE facility around the world – No exceptions!

# How We Did It: Metrics (Trailing)

## GLOBAL EHS QUARTERLY PERFORMANCE EVALUATION

	GE	Infrastructure	Industrial	Healthcare	NBC Universal	Commercial Finance	Consumer Finance	Corporate <sup>5</sup>	Research
Fatalities (GE Employees)									
VPP/Global Star Status <sup>1</sup>									
Recordable Injury & Illness Rates									
V% from same period last year									
Lost Time Injury & Illness Rates									
V% from same period last year									
Wastewater (WW) Exceedances <sup>2</sup>									
Air Exceedances <sup>2</sup>									
Reportable Spills and Releases									
Training Units Required in 2006									
Percent Trained YTD									
Compliance Findings (12 mos)									
Repeat Audit Findings									
Agency Inspections									
Env/1 NON <sup>3</sup>									
Health and Safety NON <sup>3</sup>									
Fines Proposed (US\$)									
Fines Resolved (US\$)									
Fines Pending or Open (US\$)									

<sup>1</sup> (Total Star & Merit; Applied)

<sup>2</sup> Includes Permit Misses

<sup>3</sup> NON = Notices of Non-Compliance

<sup>4</sup> Findings aged 60 days only

<sup>5</sup> Includes CEP & CPSO

# How We Did It: Programs – Health and Safety Framework



























[+ Click to expand all Guidance](#)

[Click to View in Another Language](#)

Level #	Evaluation Guidelines Question #	Validated? (Current Answer Shown in Blue)	Validation Note
Sub-Element: 1.0 1. Program Requirement Sub-Element Score: [ 2 / 5 ] <a href="#">Top</a>			
<a href="#">Level 1</a>	<b>4.1.1.1</b> Are there at least three (3) health and safety activities/teams available for employee and management participation?  <b>GE Guidance:</b> <a href="#">+</a> Programs which are interactive and participatory such as: ergonomics, accident investigation, first ...	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable <input type="checkbox"/> Under Evaluation	currently there are four teams available at our site.
<a href="#">Level 2</a>	<b>4.1.2.1</b> Have individual roles and responsibilities been developed and documented for each safety team or committee member?  <b>GE Guidance:</b> <a href="#">+</a> Each committee or team must have clear, measurable roles and responsibilities. The roles and respon...	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable <input type="checkbox"/> Under Evaluation	roles and responsibilities documents have been created and dispursed.
	<b>4.1.2.2</b> Has a charter been written for each safety team or committee?  <b>GE Guidance:</b> <a href="#">+</a> Each committee or team must have a clear charter that is measurable. The Charter must be specific V...	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable <input type="checkbox"/> Under Evaluation	charter has been created.
<a href="#">Level 3</a>	<b>4.1.3.1</b> Does the membership of each committee/team represent a cross-section of employees and management?  <b>GE Guidance:</b> <a href="#">+</a> Each facility committee/team should have participation from a cross section of all levels of employee...	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Not Applicable <input type="checkbox"/> Under Evaluation	each membe unsure of what others members areponsibilities are.
	<b>4.1.3.2</b> Do committees/teams meet regularly (example: ...	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	N/A

# How We Did It: Programs – Health and Safety Framework

Administrator Access

Framework Element	Element Owner	Baseline Score			Improve Score			Audited Score? 	Current Element Color & Score G:Green,Y:Yellow, R:Red NS:Not Scored	Next Due Date	
		Element Score	Validated Qns	Date Scored & Qns Date	Element Score	Validated Qns	Date Scored & Qns Date				
HEALTH AND SAFETY MANAGEMENT											
1.0 Site Health and Safety Policy	 <a href="#">Emre Yucel</a>	3.5   5.0	3   5	07/05 [2005]				Ilo		Y (3.5)	7/26/06
2.0 H&S Expectations & Performance Appraisals	 <a href="#">Ben Jesmer</a>	2.3   5.0	9   11	01/05 [2005]				Ilo		R (2.3)	1/10/06
3.0 Hazard Analysis and Regulatory Compliance	 <a href="#">Emre Yucel</a>	2.5   5.0	19   24	01/05 [2005]				Yes		R (2.5)	1/10/06
<a href="#">4.0 Employee Involvement</a>	<a href="#">Jason Krueger</a>	4.0   5.0	20   21	05/05 [2005]	4.0   5.0	20   21	07/05 [2005]	Ilo		G (4.0)	7/14/06
<a href="#">5.0 Health and Safety Specialist</a>	<a href="#">Jayne Latham</a>	1.0   5.0	3   11	04/05 [2005]	2.0   5.0	7   11	04/05 [2005]	Ilo		R (2.0)	4/21/06
<a href="#">6.0 Accident Reporting, Investigation and Follow-up</a>	<a href="#">Jason Krueger</a>	3.3   5.0	20   23	05/05 [2005]				Ilo		Y (3.3)	5/16/06
7.0 Health and Safety Training	 <a href="#">Michael Corrigan</a>	1.5   5.0	5   13	05/05 [2005]				Ilo		R (1.5)	5/3/06
<a href="#">8.0 Health and Safety Housekeeping and Inspections</a>	<a href="#">Elizabeth Staley</a>	2.0   5.0	7   23	07/05 [2005]	1.7   5.0	6   23	07/05 [2005]	Ilo		R (1.7)	7/15/06
<a href="#">9.0 Personal Protective Equipment</a>	<a href="#">mohamed abdellah</a>	3.7   5.0	13   23	03/05 [2005]	2.3   5.0	17   23	05/05 [2005]	Ilo		R (2.3)	5/20/06
10.0 Contractor Safety	 <a href="#">Smitha Purvam</a>	4.4   5.0	32   35	05/05 [2005]				Ilo		G (4.4)	5/20/06
<a href="#">11.0 Emergency Preparedness and Fire Prevention</a>	<a href="#">Smitha Purvam</a>	1.7   5.0	9   26	07/05 [2005]				Ilo		R (1.7)	7/20/06
<a href="#">12.0 Job Safety Analysis</a>	<a href="#">Vijay Alluru</a>	0.0   5.0	0   23	05/05 [2005]	2.8   5.0	18   23	07/05 [2005]	Ilo		R (2.8)	7/8/06
<a href="#">13.0 High Risk Operations</a>	<a href="#">Gouthami Iluty</a>	3.0   5.0	25   30	03/05 [2005]	5.0   5.0	30   30	06/05 [2005]	Ilo		G (5.0)	6/1/06
<a href="#">14.0 Management of Change and Preventive Maintenance</a>	<a href="#">Smitha Purvam</a>	0.7   5.0	2   19	01/05 [2005]				Ilo		R (0.7)	1/28/06
<a href="#">15.0 Industrial Hygiene</a>	<a href="#">Smitha Purvam</a>	1.8   5.0	14   51	05/05 [2005]				Ilo		R (1.8)	5/23/06
<a href="#">16.0 Chemical Management</a>	<a href="#">Andrew Cox</a>	0.0   5.0	0   40	02/05 [2005]	0.0   5.0	0   40	04/05 [2005]	Ilo		R (0.0)	4/28/06
<a href="#">17.0 Ergonomics</a>	<a href="#">Lindsay McPeck</a>	4.3   5.0	35   36	04/05 [2005]				Ilo		G (4.3)	4/26/06
<a href="#">18.0 Motor Vehicle Safety</a>	<a href="#">Elizabeth Staley</a>	0.0   5.0	0   27	01/05 [2005]				Ilo		R (0.0)	1/28/06
<a href="#">19.0 Medical Services</a>	<a href="#">Jason Krueger</a>	0.0   5.0	1   53	02/05 [2005]				Ilo		R (0.0)	2/9/06
<a href="#">20.0 Program Evaluation</a>	<a href="#">Natasha Klenke</a>	4.0   5.0	5   7	07/05 [2005]				Ilo		G (4.0)	7/13/06



# ***How We Did It: Metrics (Leading)***

## **H&S Framework Scorecard**

- 21 element / 540 question scores submitted 2x / yr
- Trend analysis

## **Operational Metrics - Supervisor Scorecards**

- Performance reviews at least monthly
- Metrics tailored to site operations designed to drive supervisor behaviors that will find & fix H&S issues before an accident finds them
- Injury/illness prohibited as lone metrics. Must include “leading behavior” metrics
- An example...

## Ops Metrics

Expectation: **Required**Site Utilization Status: 100%Elizabeth Staley [Permissions](#) [Logout](#)

Reports &amp; Tools

## Mt Vernon IN US - Lexan

Lexan

Rollup for Fiscal Week:

14

2006

Refresh

Metric Group:

HS Supervisor Scorecard

Metric Category:

All

Data entry for period "FW 15" initiated: Thu, 13-Apr-06...ends: Wed, 19-Apr-06.

Site Scorecard  
Fiscal Week 14BPA I/III/III LEXAN  
Jeffrey L AndersonBrine Recovery LEXAN  
Susanne KarstFinishing LEXAN  
Brian D LockhartPhenol JV  
Jeffrey L AndersonProcess Technology L / LDF  
Mary Ann ShrodeResin/Phosgene LEXAN  
Nathaniel R Weiner

Site

	Goal Performance	Inspections				Leadership Involvement		Process Indicators					
		Housekeeping Inspections	PPE Compliance Observations	PPE Compliance (Number of Operators Compliant)	PPE Compliance % [auto-calculated]	Safety Dialogues by Unit [auto-generated]	Safety Communication Meetings	Recordable I&I Cases [auto-generated]	Number of First Aid Cases [auto-generated]	Near Miss Reports by Unit [auto-generated]	Training Completion Percentage [auto-generated]	SRA/JSA	Unauthorized Temporary MOCs
Worse than goal													
No Data													
At / Better than goal													
No Goal													
— Not Set Up / NA													
Show Dashboard:													
Sort By: Entity													
↑ = delegate													
Goal Performance	80%	100%			87%		100%	100%			100%	37%	75%
BPA I/III/III LEXAN Jeffrey L Anderson	64%	6	9	7	77.8%	26	4	0	0	2	80.1%	0	
Brine Recovery LEXAN Susanne Karst	70%	18	1	1	100.0%	38	7	0	0	3	80.5%	0	
Finishing LEXAN Brian D Lockhart	88%	26	31	31	100.0%	104	84	0	0	0	90.1%	14	
Phenol JV Jeffrey L Anderson	76%	6	5	5	100.0%	43	11	0	0	0	74.5%	0	
Process Technology LEXAN Marshall Anderson													
L LDF David Albright	88%	5	4	4	100.0%	22	5	0	0	1	74.3%	1	
Resin/Phosgene LEXAN Nathaniel R Weiner	76%	6	10	10	100.0%	66	2	0	0	0	78.8%	0	
Site Energy JV George B Hall													

Administrator Access Update Designated Leaders



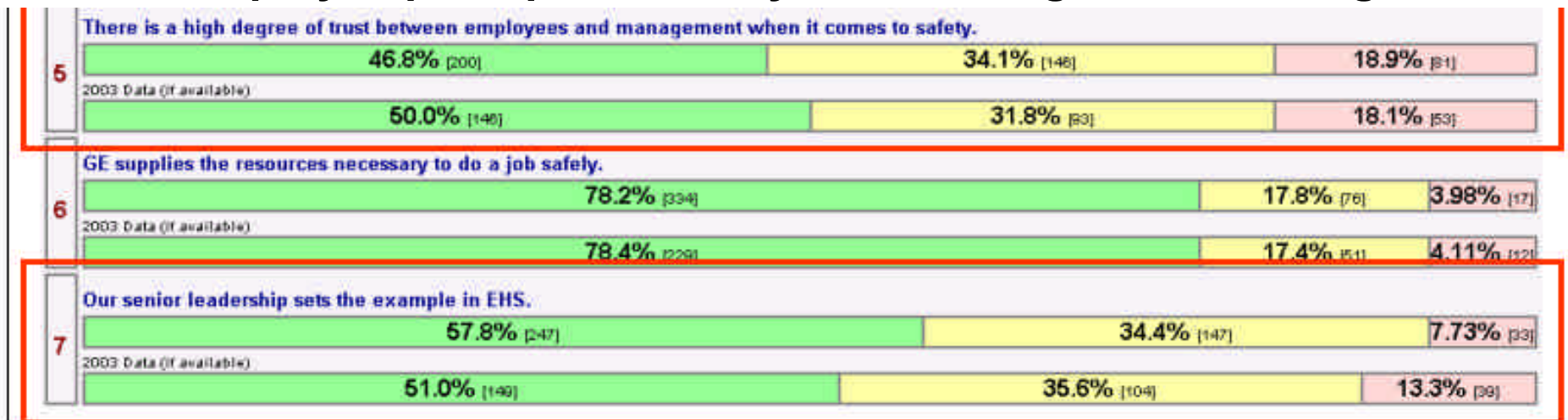
## ***How We Did It: Programs – the “Focus Program”***

- **Sites and service operations with the highest rates and other weak HS Metrics**
- **Close corporate oversight**
  - Quarterly conference calls
  - Letters to chairman and business leaders
  - Cross-business audits
  - Managers developed a single objective: “Get off the #^%ing list!”
  - Focus group has outperformed GE every year for 10 years
- **Program criteria have evolved to include Framework scores and total injuries**
  - 2006 Focus program represent 3.7% of GE sites but 40.4% of all recordable injuries
  - Now includes VPP & Global Star sites (previously an automatic “out”) and even sites with I&I rates as low as 2.0

***Focusing the spotlight on poor performers improved results***

## How We Did It: Session E

- Plant Manager report out on EHS issues
- Presentation to Business CEO and EHS VP – peers in attendance
- Every plant, every year
- Standardized template
  - Metrics (3-year trends)
  - Framework scores
  - Significant issues (e.g., fatalities)
  - Focus areas (e.g., Greenhouse Gas Emissions)
  - Best Practices
  - Employee perception survey – Measuring culture change



# How We Did It: Session E

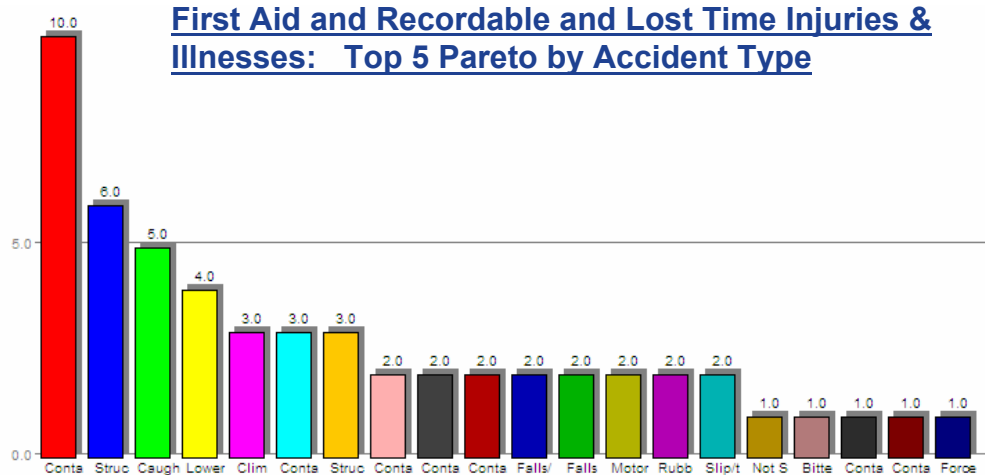
Indicate Program status

(Y/N; if N please enter when you plan to apply):

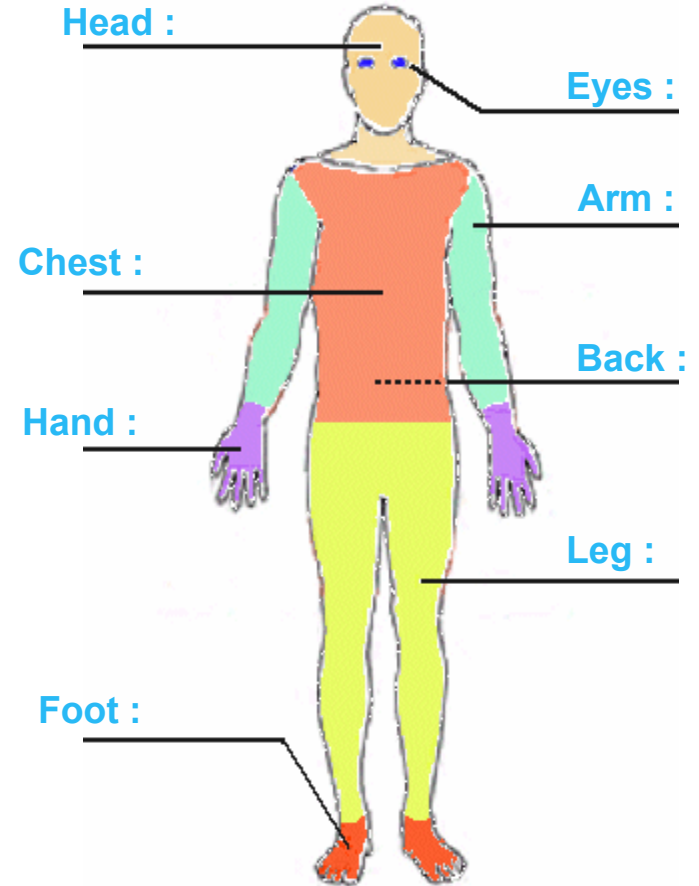
VPP		Global Star		Focus	
-----	--	-------------	--	-------	--

	Recordable Rate (# of Cases)	Lost Time Rate (# of Cases)	Local H&S Metric	Total DAFW	Total First Aid Cases
'03	# ( # )	# ( # )	#	#	#
'04	# ( # )	# ( # )	#	#	#
'05YTD	# ( # )	# ( # )	#	#	#

**Fatality/Significant Injury** (see instructions for Fatality Categories):



Enter # of Recordable/Lost Time/First  
Aid cases by body region affected  
( example: Hand: 2/0/5 )

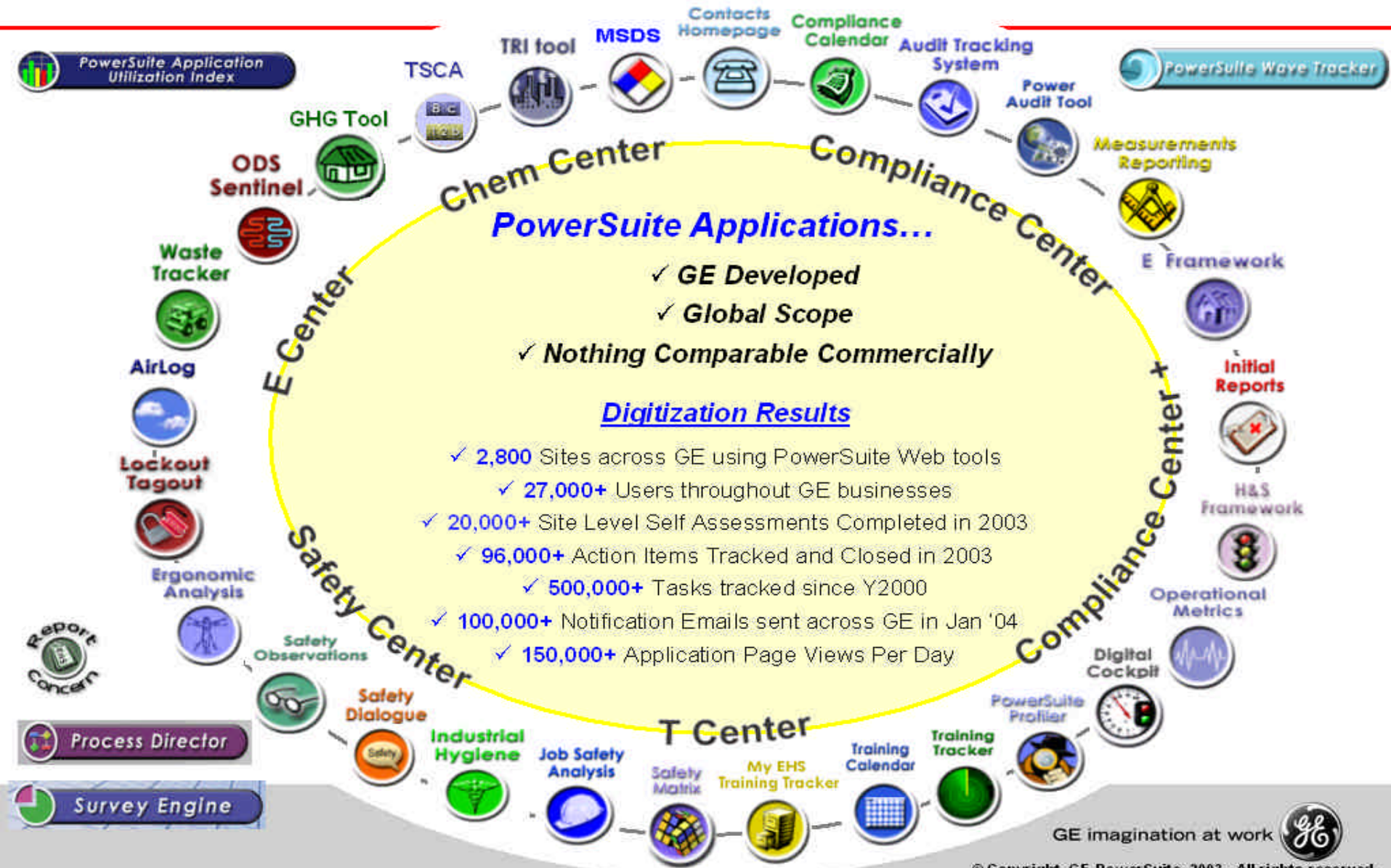


**Do you track Near Misses ? (Yes or No)**

**If Yes, include total number over the last 12 months:**

# How We Did It: Tools – PowerSuite

## GE PowerSuite Today...



# ***Success Stories Come in All Shapes and Sizes***

- **India** – acquired glass facilities where employees' first pair of shoes were safety shoes that we bought them
- **China** – plant employee approached senior management about dermatitis and lack of adequate gloves
- **Lynn**
  - **Then:** Double digit accident rate, employees manually lifting 50 lb. loads repetitively, relationship with union characterized by mutual mistrust.
  - **Now:** H&S Framework implemented, recordable rate below 3.0, union relationship significantly improved, ergonomic fixes in place
- **Appliances**
  - **Then:** Our toughest business. In early 90's several plants had recordable rates over 20.0 (in one case, over 30!), Plant Managers despaired of reducing them.
  - **Now:** Most plants have recordable rates at or near 2.0. Close cooperation between management staff and line employees
- **Supplier initiative** – key part of supplier qualification program is quality of work environment

***Still needed a rallying point on which to focus the attention of every GE plant and worker***





# GE's commitment to EHS

"Commitment to achieving our environmental, health and safety goals is an embedded value at GE. We have created an EHS operating system that drives compliance with the law, continuously improves our performance and measures our actions against our words."



Jeffrey R. Immelt; Chairman of the Board and Chief Executive Officer  
Stephen D. Ramsey; Vice President, Environmental Programs

# GE History in the H&S Excellence Process

## First STAR sites:

**1987 (VPP) GE Advanced Materials - Selkirk, NY**

**1998 (Global STAR) GE Aviation – Caledonian, Scotland**

- ★ **206 Recognized Excellence Sites**
- ★ **103 OSHA VPP Recognized Sites**
- ★ **75 GE Global Star Sites**
- ★ **22 Mexico VPP Star Recognized Sites**
- ★ **5 Alberta Canada PIR Star Sites**
- ★ **1 Ireland VPP Site**
- ★ **Our Goal for 2006 is 250 facilities recognized in the various Global Safety and Health Excellence programs**



# GE Global Star Program



**The GE Global STAR was**

- **Modeled after OSHA - VPP**
  - **Supports the GE Health & Safety Framework Initiative**
  - **Has been touted by other corporations as a model for industry**
  - **Has been touted by OSHA as a model for other countries**
  - **GE Global Star requirements go beyond VPP**
  - **75 Facilities have been awarded the GE Star to date**
- 
- \* **Recognition and Celebration is a key component to success**
  - \* **A STAR is Named.....One form of Recognition for the facilities**
  - \* **Global announcements of success**
  - \* **Achieving Global Star is now showing up on Ops Manager performance metrics**

# OSHA VPP & GE H&S Program Synergies

## 19 Elements of VPP

1. Management Commitment and Planning
2. Accountability
3. Disciplinary Program
4. Injury Rates
5. Employee Participation
6. Self-Inspections
7. Employee Hazard Reporting System
8. Accident/ Incident Investigation
9. ISA/Process Reviews
10. Safety & Health Training
11. Preventive Maintenance
12. Emergency Programs/Drills
13. Health Program
14. Personal Protective Equipment
15. Safety & Health Staff Involved with Changes
16. Contract Safety
17. Medical Program
18. Resources
19. Annual Evaluation

## 21 Elements of GE - HSF

1. Site Health & Safety Plan
2. Health & Safety Expectations and Performance Appraisals
3. Hazard Analysis and Regulatory Compliance
4. Employee Involvement
5. Health & Safety Specialist
6. Accident Reporting, Investigation and Follow-up
7. Health & Safety Training
8. Health, Safety and Housekeeping Inspections
9. Personal Protective Equipment
10. Contractor Health & Safety
11. Emergency Preparedness and Fire Protection
12. Job Safety Analysis
13. High Risk Operations
14. Health & Safety Reviews of New and Modified Facilities and Equipment
15. Industrial Hygiene
16. Chemical Management
17. Ergonomics
18. Motor Vehicle Safety
19. Medical Services
20. Program Evaluation
21. LOTO

# How Does Global Star Work?

In practice, the Global Star program sets performance-based criteria (GE Health and Safety Framework, injury and illness rates) for a managed safety and health system. It invites sites to apply, and then assesses applicants against these criteria. A comprehensive verification of the facilities systems which includes an application review and a rigorous onsite evaluation by a team of GE safety and health experts is conducted.

Leadership and employees must *demonstrate* an active robust safety partnership.

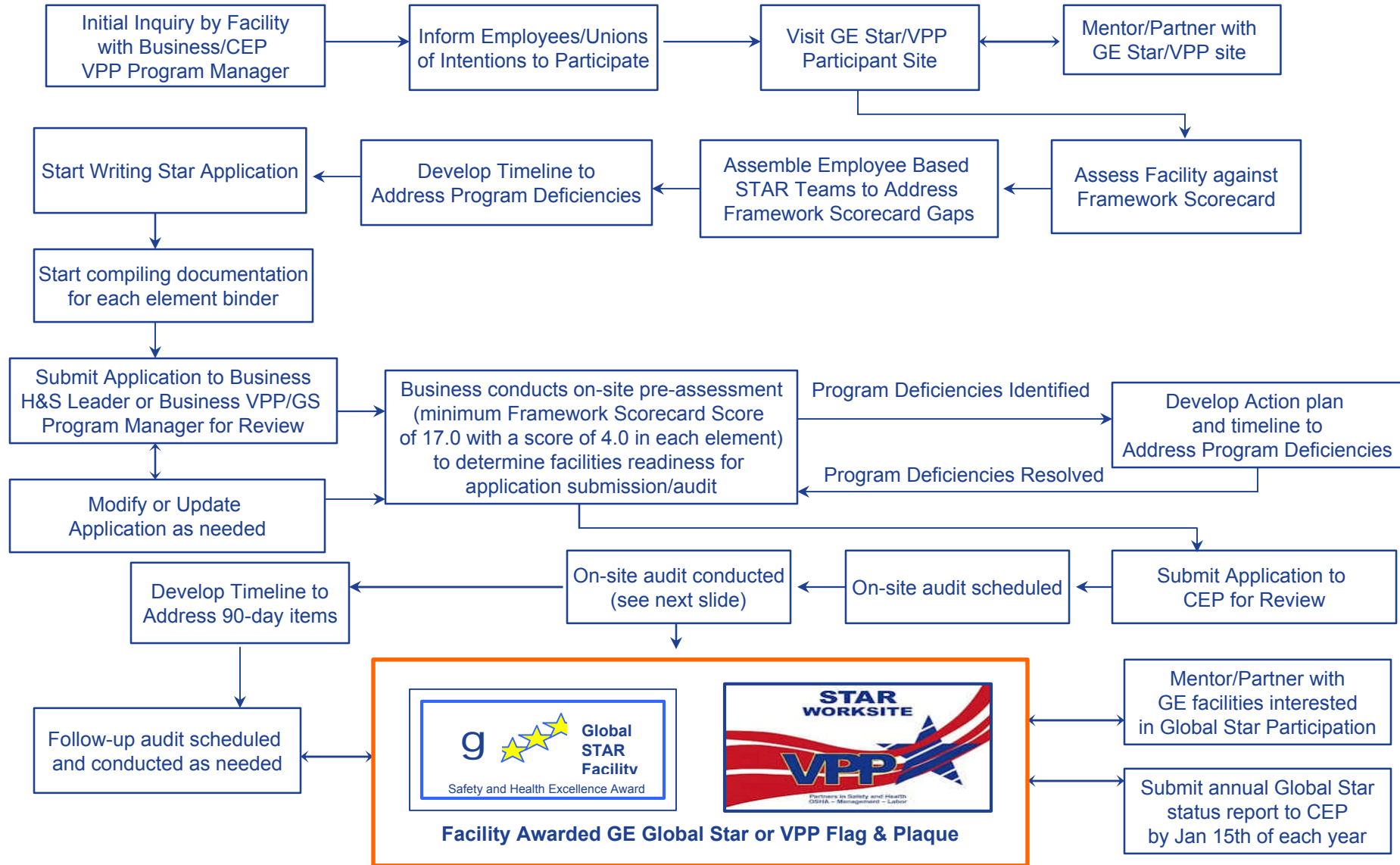
Facilities that meet the Global Star requirements, utilizing the GE Health and Safety Framework Scorecard tool (> 4.0 per element, >17.2 total score) during the audit are approved as a GE Global Star site.

Each year on February 15<sup>th</sup>, the facility must submit a comprehensive self assessment of their management systems to the CEP Manager of VPP discussing improvements that have been made and gaps identified in their programs along with action plans for corrections.

Every 5 years from the first date of certification another rigorous onsite evaluation is conducted.



# Process Flow Chart for VPP and GE Global Star



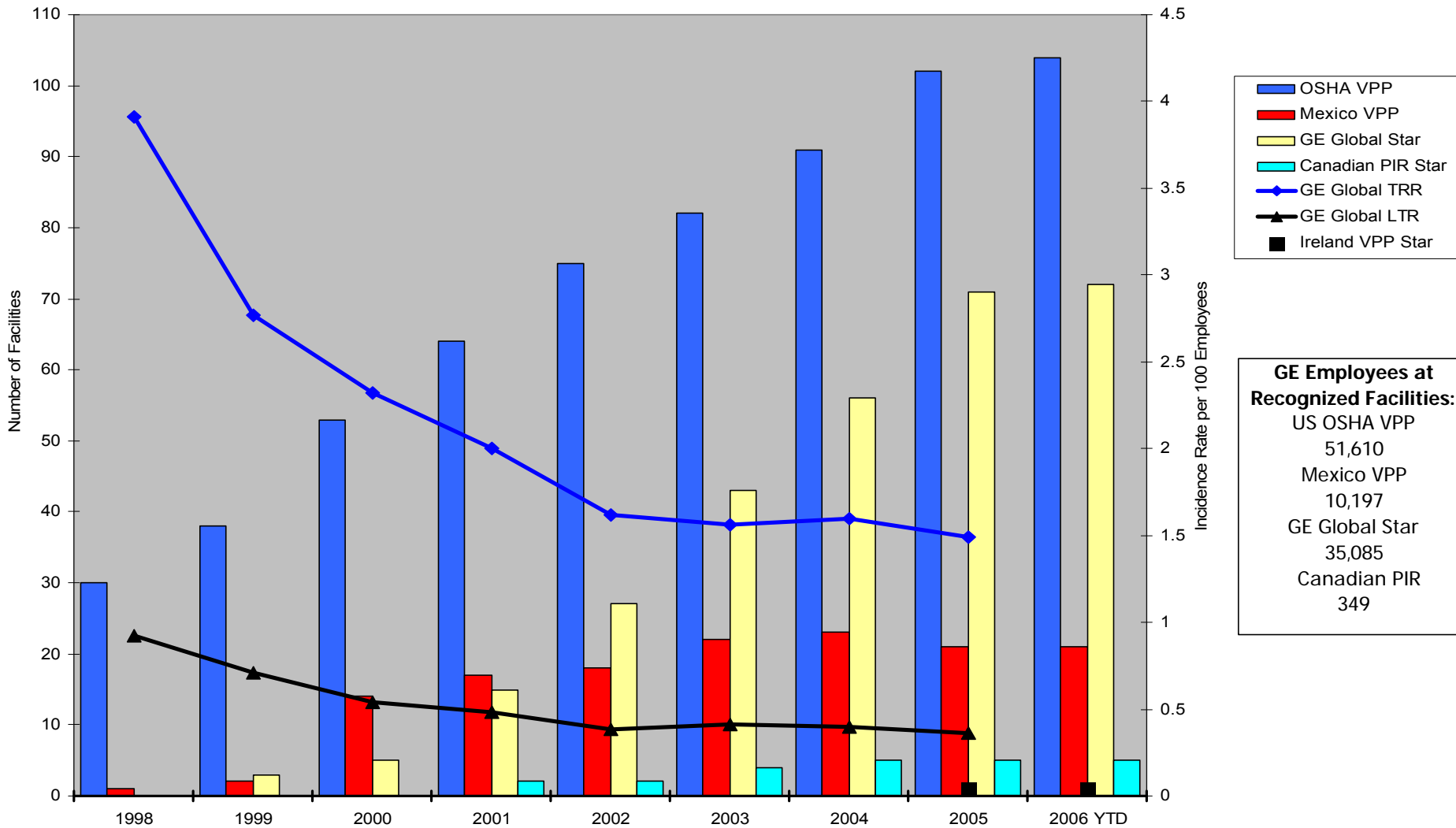
# GE Global Star Audit

- Led or sponsored by corporate
- Not done by same business personnel
- 3-5 days, 2-11 auditors
- Site H&S program overview and tour
- Detailed assessment of all aspects of 21 elements by expert auditor
- Daily report-outs – findings and closure status by site team
- No core systems findings allowed
- Extensive interviews with operational leadership, supervision, employees, site EHS team – typically 30-70% of personnel
- “Operationalization” required
- Audit team dinner with site team

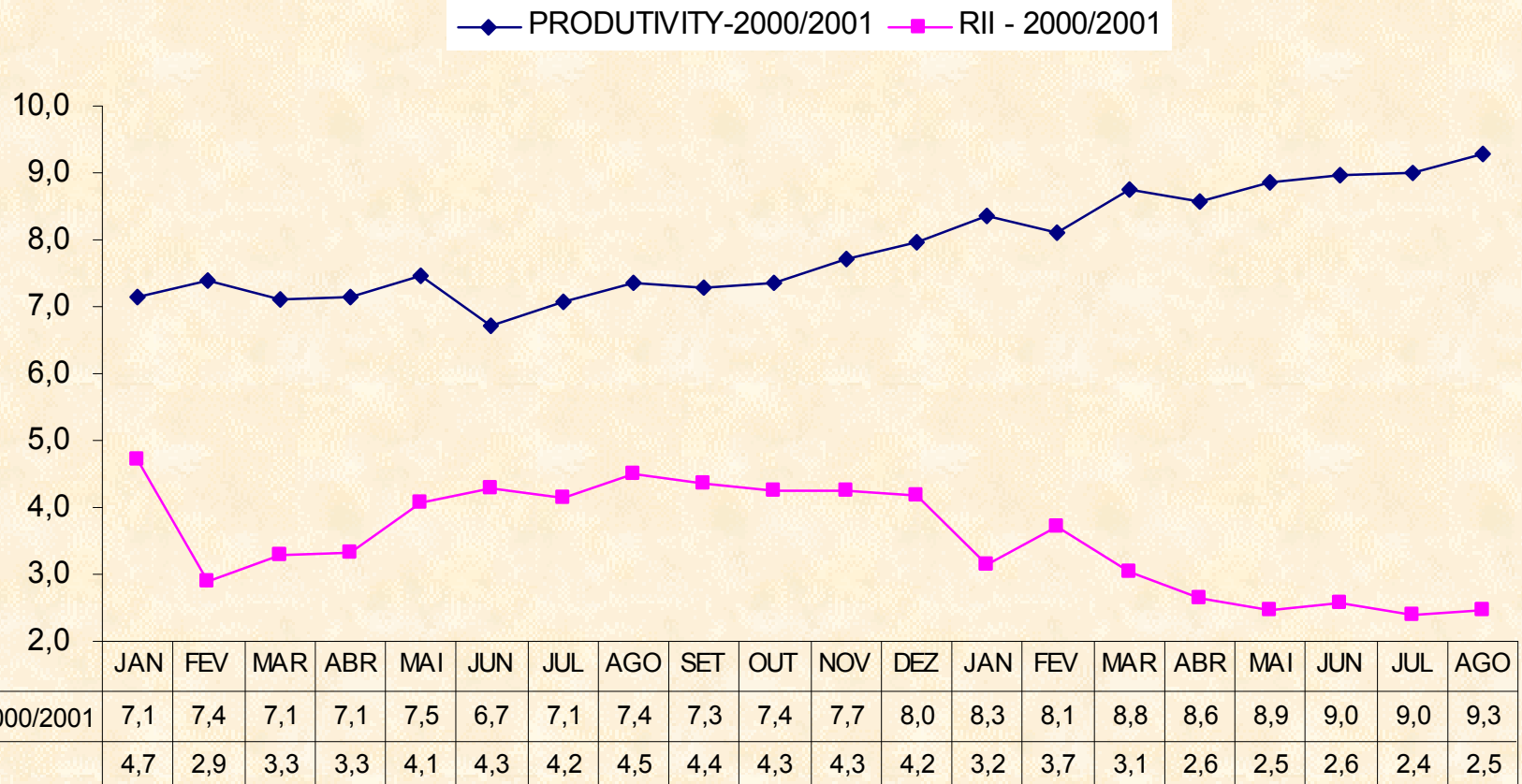
# Benefits of Participation

- ★ 1994 - 2005: Double digit reduction in total and lost day recordable rates and incurred workers compensation costs – continuous improvement
- ★ Breakthrough safety performance and program improvements in historically high rate/cost facilities
- ★ Positive recognition of site achievements by state and national governments, and trade groups
- ★ Provides uniform company-wide safety and health process that has a proven track record. Synergy...
  - Employee morale, productivity, and quality typically improve
- ★ Provides visible commitment and a great recognition tool with employees, unions, customers, investors and regulators.
- ★ Helps position company as employer of choice

# Globalization of Safety & Health Excellence Recognition Program vs GE Global Total Injury and Illness and Lost Time Incidence Rates



# Productivity vs Recordable Injury Rate

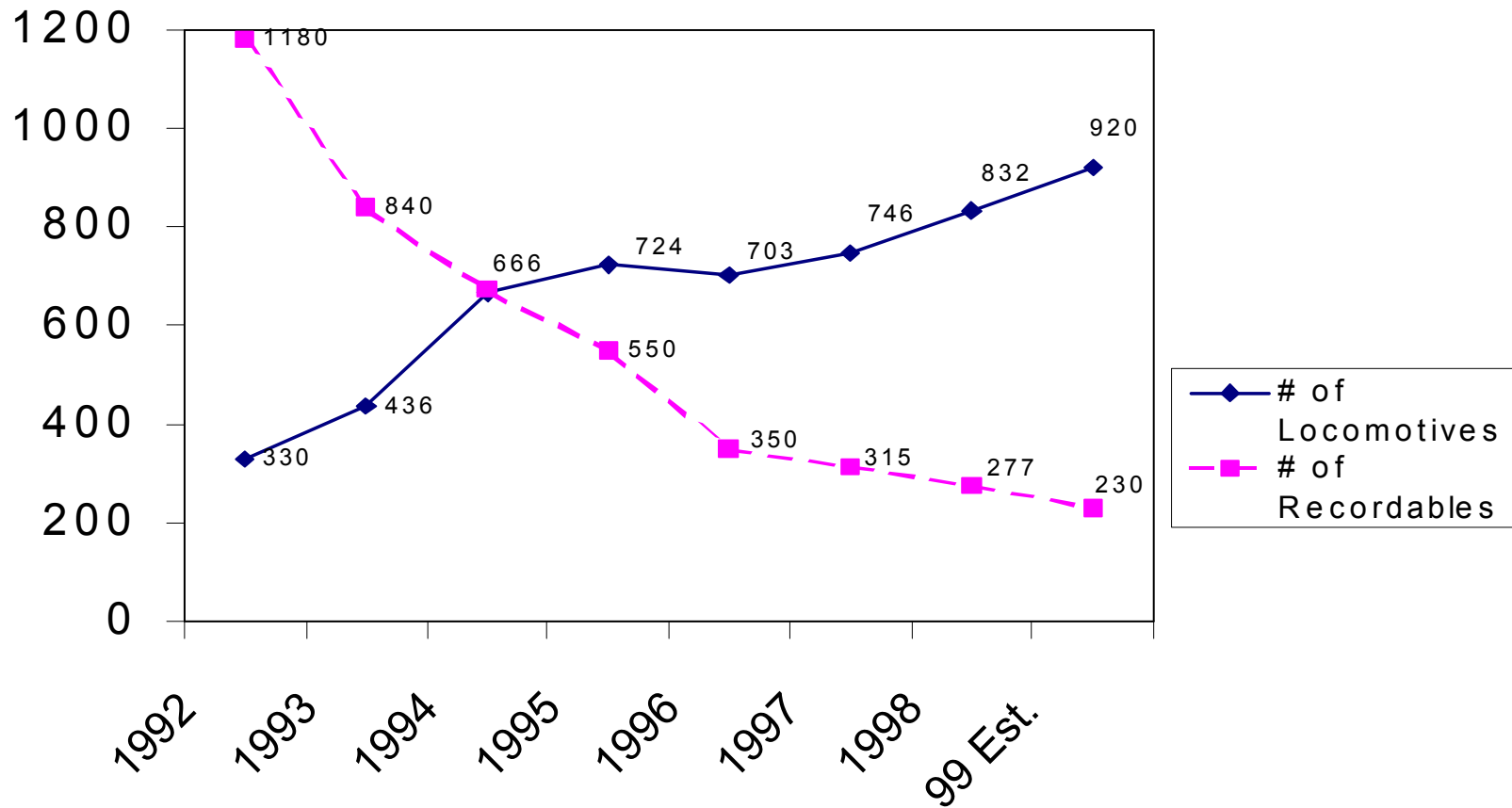


GECP site in Brazil demonstrating that improved H&S performance can contribute to increased productivity

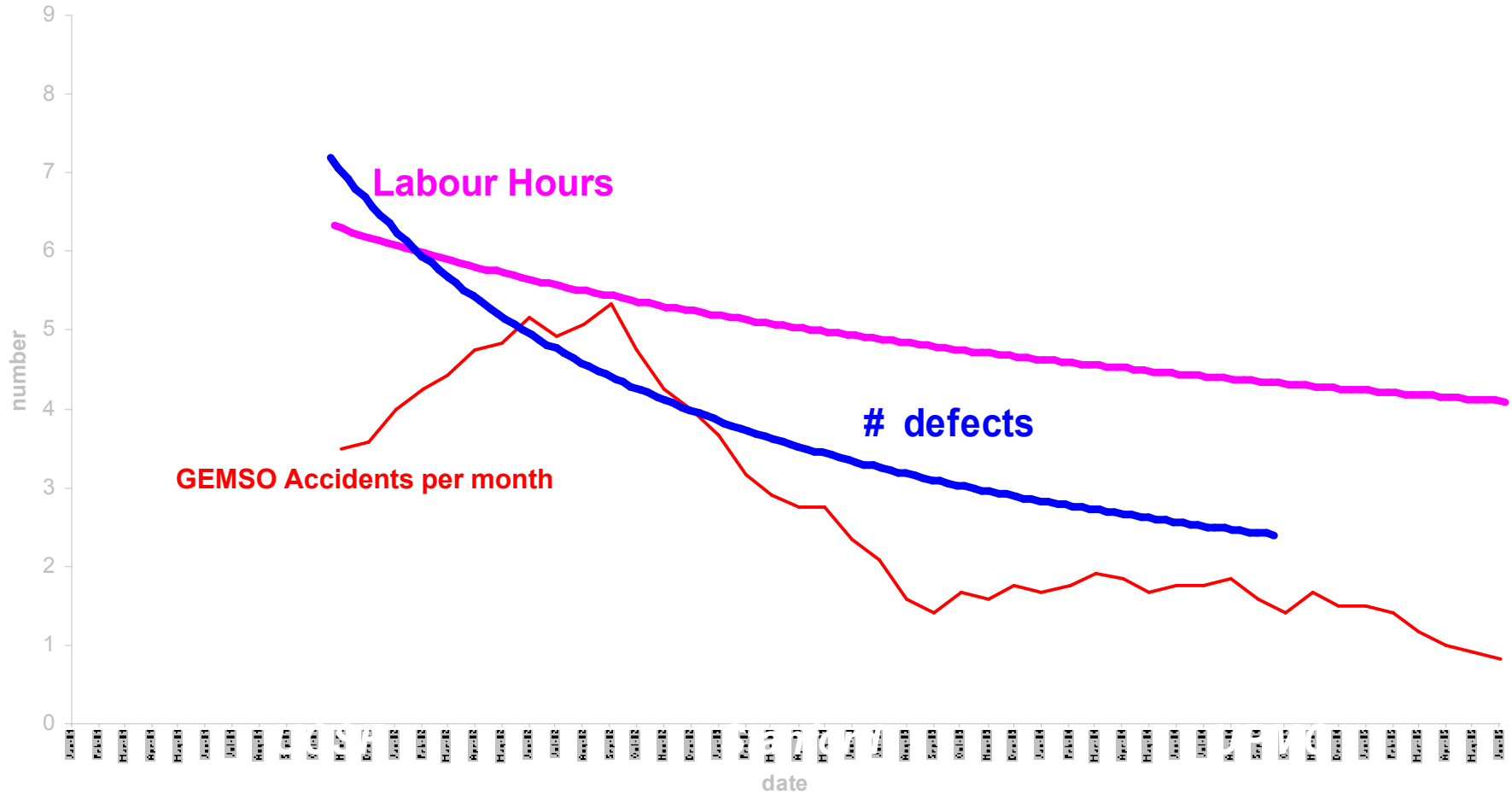


# Productivity vs Recordable Injuries

GE Transportation Systems - Erie, PA



# Accidents, Product Defects & Productivity



# Benefits of Participation – Employee Morale

- **The numbers:** Company-wide recordable rate of 1.45, lost time case rate of 0.31
- **The people:** If 2005 recordable rate remained the same as 1996, we would have had 13,415 more injuries and 3,169 more lost time cases compared to our actual 2005 performance.
- **The business case – cost avoidance:** Cost savings of \$74.9MM /yr.
- **Awards**
  - 62 Best Practices Identified by OSHA at GE VPP facilities (1999 - present)
  - 42 OSHA Special Government Employees (SGE)
  - 12 VPP Outreach Award Winners
  - 6 VPP Achievement Award Winners
  - 2 VPP Innovation Award Winners



Name

A

Star

Locating

Your Star

in the

Heavens

© Royale Stellar Society

# Royale Stellar Society

This Star will henceforth be known by this name and will be permanently recorded in the book, "*Star Names and Stellar Designations*", which will be published and copyrighted by the United States Library of Congress in Washington, D.C.

Let it be known that the Royale Stellar Society does hereby redesignate Star No. 49207 to the new name of:

*GE Transportation  
Systems  
San Luis Potosi,  
Mexico*

In witness whereof:



M. Dekman  
Registrar

2-3-01  
Date



imagination at work